

spray and seepage. The Spray Cliff is extremely uncommon in the Piedmont, occurring primarily in the Blue Ridge and Great Smoky Mountains. The Spray Cliff at Lower Cascade Falls is of high quality, though with substantially lower species diversity than montane occurrences. A variety of mosses and liverworts, including montane disjunct species, thrive in the moist, humid microclimate. A variety of herbs requiring cool, moist habitats may be present including saxifrages (*Saxifraga* spp.), alumroots (*Heuchera* spp.), and other species.

The Montane Acidic Cliff community is present at Torsys Falls-Torsys Den area, Upper Cascade Falls, and Lower Cascade Falls on steep to vertical quartzite outcrops. Scattered Virginia pine, Carolina hemlock, and chestnut oak and shrubs such as mountain laurel, great rhododendron, and blueberry are present. The uncommon sand-myrtle (*Leiophyllum buxifolium*) is present at Lower Cascade Falls. Herbs are very sparse, limited to crevices and small soil pockets on the rock. They include northern oat grass, little bluestem, trailing arbutus, and Michaux's saxifrage (*Saxifraga michauxii*), and mountain spleenwort (*Asplenium montanum*), and others. The rare Bradley's spleenwort (*Asplenium bradleyi*) occurs in this community at Tory's Den. A record for rare translucent orthodontium moss (*Orthodontium pelluscens*) known from a vague record from "...acid rocks, base of vertical cliff, under heaths, Hanging Rock Mountain, near Danbury" may be from this community. The rare large witch-alder, sweet pinesap, and shinyleaf meadowsweet (*Spiraea betulifolia* ssp. *corymbosa*) occur in forests adjacent to cliff areas along Cascade Creek.

Other rare species are recorded from the site, but their reported locations are too vague to associate them with community types. Below are tables of all rare plant and animal species recorded from the site. Although some have not been seen recently, they are all believed to be extant with one exception: Schweinitz' sunflower (*Helianthus schweinitzii*) may be extirpated.

Rare Plant Species of Hanging Rock State Park and Vicinity
<i>Asplenium bradleyi</i> (Bradley's spleenwort). State Candidate fern species, reported from an outcrop in the vicinity of Tory's Den and on a "rock outcrop across from the Upper Cascades".
<i>Clematis glaucophylla</i> (white-leaved leatherflower). State Candidate species, known from a very obscure report at "Hanging Rock". The report could be in reference to an altogether different location.
<i>Fothergilla major</i> (large witch-alder). State Candidate species, reported from near Moores Knob, from a tributary of Cascade Creek just above Upper Cascade Falls and near the entrance to the park.
<i>Gnaphalium helleri</i> var. <i>micradenium</i> (small rabbit tobacco). State Candidate species, from an obscure record from a "wooded slope, Hanging Rock State Park".
<i>Helianthus schweinitzii</i> (Schweinitz's sunflower). State and Federally Endangered species, collected in "chestnut oak woods, along ridge-top trail to Hanging Rock, ..." but searched for on three separate occasions by biologists and not found. Considered extirpated, but could be extant.